

Enterprise Networks

General Release Bulletin

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MAT 5

Meridian Administration Tools (MAT) Release 5.02 is now available for the following:

- Systems running X11 Releases 19-22
- Option 11 systems running X11 Release 18
- Systems running X11 Releases 14 or 17
- Systems running X11 International Releases 16.9xG or 18.4xH

MAT 5 is a portfolio of Microsoft Windows 95 PC based applications designed to provide a user-friendly Graphical User Interface (GUI) system management tool for the Meridian 1. MAT 5 consists of the following applications:

- Common Services
- Maintenance Windows
- Alarm Management
- ESN Analysis and Reporting Tool (ART)
- Station Administration
- Traffic Analysis
- Call Accounting
- Call Tracking

Common Services

MAT 5 contains a new Common Services that consists of the following functions:

Navigator

The Navigator is the interface through which all MAT 5 systems and services are accessed via a tree-based user interface that organizes managed equipment into Sites and Systems.

System Window

System Windows are launched from the Navigator providing access to individual systems. A tree-based user interface is used to organize and launch management applications.

System Terminal

The System Terminal consists of Overlay Passthru and VT220. The Overlay Passthru application provides access to the Meridian 1 overlays using Ethernet or PPP. The VT220 application provides access to the Meridian 1 overlays and any other VT220 compatible system using a serial connection.

When an overlay is accessed using the Overlay Passthru or VT220 applications, an on-line help message is displayed on the window's status line as each prompt is output. In addition, more detailed information on the overlay prompts, commands and error messages is provided through the on-line context sensitive help facility.

Maintenance Windows

Maintenance Windows provides a GUI replacement for the overlay-based hardware maintenance commands. Maintenance Windows is accessed via the Core Equipment icon under a M1 system in the System Window. Items covered by Maintenance Windows are:

- Core CPU
- I/O Ports
- Network Groups
- Network Loops (includes B/D Channels)
- PE Shelves
- PE Cards
- PE Units

The user can select an item in the list and choose a maintenance command (such as, enable, disable, and test) from a menu. Only the commands appropriate for the selected object are displayed in the menu.

Maintenance Windows will also provide the real-time status for each of the selected hardware groups. Also included in Maintenance Windows is on-line context sensitive help for all objects, commands and messages from the switch.

Alarm Management

Alarm Management consists of a number of components -- Events, Alarm Banner, Event Default Table and Event Preference Table to improve handling of system generated events. The Event Log is preserved through a system sysload and initialization of a Meridian 1 and can then be uploaded to the PC and the alarm list viewed through the Events application. The Event Default Table specifies the default severity for events and the Event Preference Table then provides a user interface to modify these severity defaults and to define escalation and suppress thresholds for each event on a system by system basis.

- Events
The Event Log Browser provides a graphical user interface to view the contents of a Meridian 1 system's event log. A system event log contains alarms, which are actionable events (having a severity of critical, major or minor), as well as non-actionable events (having a severity of info).
- Alarm Banner
An Alarm Banner is provided on the PC to summarize the number of new critical, major and minor alarms contained in the event log. In addition, the receipt of a new critical alarm will cause the outline of the count of critical alarms count to flash.

ESN Analysis and Reporting Tool

The ESN Analysis and Reporting application brings the power and ease-of-use of a Windows GUI to the data input and output functions currently performed by Overlays 86, 87, and 90. This feature includes tools for reporting and analyzing ESN data, as well as installing new ESN data for a customer with no ESN data on a PBX.

Station Administration

Station Administration simplifies day-to-day station adds, moves and changes to single and multi-line telephones. Station Administration enables system users to configure telephone sets, program features and assign DN's and TN's for single sets or groups of telephones. Station programming can be conveniently accomplished via the PC, then uploaded to the Meridian 1 either immediately, or at a scheduled date and time.

Traffic Analysis

Traffic Analysis is designed to convert Meridian 1 raw traffic statistics collected in Overlay 2, either on demand or on a scheduled basis, and present the statistics to the user in an easy-to-read format. Traffic Analysis provides system administrators with meaningful information related to Meridian 1 Trunk, Attendant, Network Loop and CPU use, etc. System administrators can use this information to analyze Meridian 1 system resources, forecast growth and plan for staffing requirements.

Call Accounting Module

The Call Accounting Module enables comprehensive CDR reporting for call costing. It can be used to provide details on the actual usage of the system for assessing the effectiveness of telephone services or to itemize calls to specific groups (divisions or departments for example) for individual billing purposes and other types of cost allocation. Call Accounting is integrated with Station Administration, removing the need to re-enter employee data that already exists within Station Administration. However, Station Administration is not a prerequisite for Call Accounting.

Call Tracking Module

Call Tracking is an on-line call monitor program for the examination of call usage patterns leading to toll fraud detection and notification. Graphs are used to indicate trends and provide displays of unusual calls, enabling the user to adjust equipment and services to maximize resources. Multiple filtering templates allow the customization of toll fraud criteria. When the filter criteria have been met the Call Tracking module provides a number of alarm notification options to alert a system administrator via fax, modem, etc. Call Tracking is integrated with Call Accounting but can exist without it.

This document describes the installation procedure, system requirements, and features that are described in more detail in the Meridian Administration Tools user guides for each of the applications.

Please read the advisements in this document that correspond to the applications that you have purchased.

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1. Meridian 1 Requirements

The following chart outlines the available MAT applications and the X11 software and connection types supported.

MAT Application	X11 Release Supported								Connection Type ¹
	14	16 ²	17	18 ³	19	20	21	22	
Maintenance Windows								☒	Ethernet/PPP
Alarm Management								☒	Ethernet/PPP
System Terminal:									
Overlay Passthru								☒	Ethernet/PPP
VT220	☒	☒	☒	☒	☒	☒	☒	☒	Serial
ESN ART	☒	☒	☒	☒	☒	☒	☒	☒	Ethernet/PPP/Serial
Station Administration	☒	☒	☒	☒	☒	☒	☒	☒	Ethernet/Serial
Traffic Analysis	☒	☒	☒	☒	☒	☒	☒	☒	Ethernet/Serial ⁴
Call Accounting	☒	☒	☒	☒	☒	☒	☒	☒	Serial
Call Tracking	☒	☒	☒	☒	☒	☒	☒	☒	Serial

1.1. Systems equipped with IOP Cards

For Meridian 1 systems equipped with IOP cards the minimum supported vintage is NT6D63BA Rls. 01

1.2. Systems equipped with IOP/CMDU Cards

Certain IOP/CMDU cards, vintage number NT5D20AA, appear to have a problem when attempting to connect to a Meridian 1 via Ethernet.

This is denoted by the MAT System Window not being able to make an Ethernet connection to the Meridian 1. No alarm messages are received and there is no indication of faults on the card.

Course of Actions:

Ensure the IOP/CMDU card was working prior to MAT installation and the cabling for Ethernet has been installed correctly.

¹ Ethernet and PPP connections are only supported on Release 22 or later and requires the MAT Management Interface software package 296.

² Only X11 International Releases 16.9xG are supported.

³ X11 Release 18.3xH is supported on Option 11 systems only.
X11 International Releases 18.2xH are not supported.

⁴ If traffic is being collected from a buffer box only a serial connection is supported.

From the MAT PC, open a DOS window by selecting MS-DOS Prompt under the Start /Programs menu and perform the following command:

1. Type PING <switch IP address, ie. 47.1.1.1>
If a 'Request Timed Out' message appears, it indicates that the PC cannot connect to the Meridian 1.
2. The possible causes are:
 - i. Cabling Fault
 - ii. MAT PC set up incorrectly
 - iii. Incorrect IP address or network mask (either on the Meridian 1 or in the Communications tab for the Meridian 1 system properties in MAT)
 - iv. M1 IOP or IOP/CMDU card is faulty
3. This problem requires further investigation and the user is therefore recommended to contact their support organization to determine the exact cause of the communication problem.

1.3. X11 Software Packages Required

The following packages are required for each of the applications listed:

Alarm Management	164, 242, 243 and 296
Maintenance Windows	164, 242, 243 and 296
System Terminal - Overlay Passthru	164, 242, 296
Ethernet Connection for (Station Administration, Traffic Analysis and ESN ART)	164, 242 and 296

2. PC Configuration Recommendation

2.1. Hardware and Software

The following PC hardware and software is recommended to run MAT 5:

- A Pentium Processor PC with:
 - Minimum clock rate of 75 MHz
 - 500 MB free space on hard drive (includes Windows 95 requirements).
 - 32 MB of RAM
 - SVGA Color Monitor and interface card (800 X 600 Resolution for graphics)
 - 3 1/2-inch 1.44 MB floppy disk drive
 - Windows 95 (with Microsoft TCP/IP installed)
 - Ethernet Network Interface Card is required to support connection with the Meridian 1 via Ethernet.
 - Hayes compatible modem is optional for connection to remote sites, required for polling configurations (9600 BPS or better recommended).
 - PC COM port with 16550 UART ⁵
 - Parallel printer port (A printer must be configured even though it is not required to be physically attached to the PC)
 - Two (2) button Windows compatible mouse or positioning device (Bus mouse preferred to free up a PC serial port)

The PC configuration above is a recommended configuration only. MAT 5 applications will run with less than the specified RAM, but for optimal performance the recommended configuration should be used.

⁵ For external modems or direct connection the PC must have an available serial port (i.e., one not being used by a mouse or other serial device). The number of PC COM ports required depends on the number of external modem or direct connections required.

3. Product Installation and Upgrades

3.1. Migration

Migration / conversion to MAT 5 is supported from the following earlier releases:

- MAT Release 3 (3.02 or 3.5)
- MAT Release 4 (4.02 or 4.5)

Migration can only be performed once.

The Migration process will build a site in MAT 5 called MAT to store all existing MAT Release 3 or 4 Meridian 1 systems (or sites as they are known in MAT Releases 3 & 4).

In MAT Release 3 and 4 the name entered for a site's sub-directory under MATWORK will be used for the system name in MAT 5.

To migrate from MAT Release 3 or 4 to MAT 5 the following steps need to be performed:

1. Install or upgrade to Windows 95 (if necessary)
2. Install Release 3 or 4 of MAT if it is not already installed
3. Restore any archived data you want to be migrated to MAT 5
4. Remove MATShell Icon from the StartUp Folder by:
 - i. From the Start Menu select Settings followed by Taskbar
 - ii. Select Start Menu Programs
 - iii. Select Remove
 - iv. Under Start Menu / Programs / StartUp select MATShell
 - v. Select Remove
5. From the MAT Setup procedures install MAT 5 by selecting the Install/Upgrade option
6. Reboot PC
7. From MAT Setup select the Migrate Option and respond to the dialogs as necessary
8. Migration should take at most 10 minutes.
9. After MAT 5 has been working successfully for a while delete the files under MATWORK and MAT.

Communication profiles, user profiles, application data and site data are all converted.

3.2. Installation

When installing MAT 5 for the first time, the Root directory names must be 8 characters or less, i.e., C:\NORTEL (default value) or C:\PROGRAM\NORTEL\ and not C:\PROGRAM FILES\NORTEL\.

3.3. Upgrading from an Existing MAT 5 Release

To upgrade your current version of MAT 5 to the latest version the following steps need to be performed:

1. Remove MAT 5 from your StartUp Group before installing the new version.
2. Close any applications currently open including MAT 5. Choose Shut Down from the Start button, select 'Restart the computer?' from the list of choices and click on the 'Yes' button.
3. Follow the procedures detailed in the MAT 5 Installation Guide to complete the upgrade.

3.4. Rate Tables

The installation procedure used for rate tables requires the selection of the applicable carriers for all systems using Call Accounting. To select a carrier from the list provided on the 'Choose carriers' dialog use one of the following methods:

- Use the mouse to highlight the carrier and use the space bar on the keyboard to toggle the selection. A check mark will appear beside the carrier name when it is selected for installation.
- Move the mouse pointer to the space provided at the far left of the carrier name and click on the left mouse button to toggle the selection check mark.

Rate tables should only be installed after Common Services and Call Accounting have been installed.

4. LAN Considerations

The MAT PC can be attached to a Local Area Network (LAN) to provide multi-user access. The MAT applications and database must reside on the LAN Server with each client accessing the files from the server. The server used for MAT is used as a file server only and must not be used to access MAT as a client PC.

4.1. LAN Requirements

MAT is currently supported on Novell Network V3.12 and later. To operate MAT 5 on a LAN, the LAN software must support the long file names used in Windows 95. For Novell Network the OS/2 Name Space Option must be enabled.

4.2. LAN Limitation

Updates to the Navigator, such as adding a new site or updating an existing site or system, should be performed by one MAT user. All users are required to logoff before changes are made in the MAT Navigator.

4.3. Installing MAT 5 on a LAN

Copy the contents of each MAT disk to a subdirectory on a network drive. Each disk should be identified with the disk number (ie. create the subdirectory 'Disk1' (no spaces) for the contents of disk number 1). Ensure the network drive and subdirectories can be accessed by all the client PCs that will have access to MAT.

Before installing MAT on a server each client PC must be given read/write privileges to the server directory where MAT will be installed. Then each user must be mapped to the server using the same drive letter which will allow users to log in from multiple client PCs.

There are two types of network installations:

1. Install the MAT applications on the client PC - which provides increased access speed to the MAT applications.
2. Install the MAT applications on the server - which saves hard drive space on the client PCs.

Common Data will always be installed to the server for either of the network installations.

Based on your requirements choose the type of network installation and follow the steps outlined below.

Installing the MAT Applications on a Client PC:

For each client PC, choose 'Install/Upgrade' from the Setup Choices in the MAT Setup application, which is now located on the network in the Disk1 subdirectory. Setup will ask for the location of the Application Executables, Common Data and Local Data directories. Choose the locations for each directory as follows:

- Application Executables: Local PC Drive (default C:\Nortel)
- Common Data: Shared Network Drive
- Local Data: Local PC Drive (default C:\Nortel)

To choose a shared network drive use the browse button to choose the drive and directories where MAT will be installed.

Installing the MAT Applications on a Server:

The MAT applications are installed on the server during the installation of the first client PC.

For the first client PC, choose 'Install/Upgrade' from the Setup Choices in the MAT Setup application, which is now located on the network in the Disk1 subdirectory. Setup will ask for the location of the Application Executables, Common Data and Local Data directories. Choose the locations for each directory as follows:

- Application Executables: Shared Network Drive
- Common Data: Shared Network Drive
- Local Data: Local PC Drive (default C:\Nortel)

To choose a shared network drive use the browse button to choose the drive and directories where MAT will be installed.

To install additional client PCs choose 'Run from Network' from the Setup Choices in the MAT Setup application. Setup will ask for the location of the Applications and Common Data directories. Using the browse button, choose the network drive and directories where MAT was installed on the server.

5. Help Advisements

Help is not available for the following items in Common Services:

5.1. Help for Reports

No Help button is available for Reports and selecting F1 will produce the message 'The topic does not exist. Contact your application vendor for an updated help file (129)'. However, for each report available in the list, there is a brief description provided covering the content and all buttons on the dialog are self-explanatory.

5.2. Help Missing for Expire all Passwords

Expire all Passwords is a feature within User Administration, accessed from the Security menu and on selection will automatically expire passwords for all MAT user ids, including Administrator IDs, defined on the PC.

6. Common Services Advisements

6.1. Scheduler User ID and Password

The MAT scheduler requires its own User ID and Password to run any scheduled events that require MAT to log into the Meridian 1 (ie. Station Administration updates, etc.). The scheduler User ID and Password are defined on a per customer basis and are located on the Customer general tab of the System properties sheet. For Meridian 1 systems running pre-Release 22 software, the User ID and Password must be entered in upper case.

6.2. Schedule Reports

It is currently not possible to schedule Common Services Reports. The button providing this function is 'grayed' - disabled. However, it is possible to schedule ESN ART, Traffic Analysis and Call Accounting Reports.

6.3. Scheduler not in Task Bar

After a reboot, if the scheduler and queue manager are not in the task bar, the user must login to MAT and manually restart the Scheduler, from the Utilities menu in the Navigator, to ensure that the next new scheduled task is added correctly.

6.4. Executing Jobs in Queue on Exit of MAT

If MAT is terminated or logged out while jobs in the queue are being executed the Navigator will not exit cleanly and results in the following error message for each of the tasks in the task bar: 'You have insufficient privileges to close this application'. The user should wait a few moments and then terminate or log out of MAT again.

6.5. One Modem Configuration per COM Port

In Windows 95 it is possible to configure multiple modems for each COM port on the PC. As MAT will only support one modem configuration per COM Port, only one modem should be configured on each COM port MAT will be accessing. Any additional modem configurations assigned to a COM port should be removed as they will be ignored by MAT.

6.6. Communications Using PPP

Communications via PPP is only supported for Maintenance Windows, Alarm Management, System Terminal and ESN Analysis and Reporting Tool.

6.7. PPP Connection Lost

If the PPP connection to a Meridian 1 is lost, a dialog is displayed, by Windows 95, with the options to either 'Reestablish Connection' or 'Cancel' - the 'Cancel' option must be selected. The user should then wait for MAT to be informed of the connection loss and then follow the dialog(s) displayed.

6.8. Logging Out and Terminating MAT

All MAT applications must be closed before logging out or terminating MAT. When terminating MAT the user may receive a message stating that it was unable to correctly terminate MAT. The user is then advised to terminate MAT a second time to correctly exit MAT.

6.9. Passwords

The maximum password length supported in MAT is 16 characters, however it is possible to enter a password that is longer than 16 characters in the Change Password dialog box. MAT will accept only the first 16 characters entered as the valid password. The recommendation is to not enter passwords longer than 16 characters.

6.10. Connected Users

The Connected Users command under the Security Menu in the System Window should only be used when connected to a Meridian 1 running Release 22.

6.11. Force Logoff

The Force Logoff feature should not be used to force the current MAT user off the Meridian 1. If the feature is used the MAT user will receive an error message and will need to terminate the MAT session with the Meridian 1.

6.12. PC Event Log

The PC Event log contains a list of events that occurred on the PC and indicates the severity of the event. Currently, not all the events that occur on the PC are being written to the PC Event log. In addition, the severity levels of the PC events are still being defined. When viewing the PC Event log it is recommended that the user choose to view all events.

The PC Event log should not be kept open or minimised on the task bar as this may affect the performance of MAT applications.

6.13. Device Contention

The Queue Manager contains certain restrictions when managing multiple queues for a single device. This applies when multiple jobs are sent by the Scheduler to the Queue Manager for execution and therefore have multiple queues stored in the Queue Manager database. A 'job' is a group of 'tasks' that is sent to the Queue Manager as a 'queue'. If these queues attempt to access the same device (e.g., COM port) at the same time, then only one queue will be able to use it successfully. All other queues will NOT be able to access that device and will therefore not run.

To prevent this from occurring during normal system operation, use the following guidelines:

- 1) If you need to schedule multiple jobs for a single device all at the same time, or if you cannot schedule the jobs so that you are sure that the device will be released in time, then schedule the jobs as multiple tasks sent to a single queue. The Queue Manager can then manage these tasks in the single queue and send them to the device as each task is completed. Each task in the queue will wait for the previous task to release the device before attempting to access it. This way, you will ensure that all the jobs (in this case, tasks) will be able to access the device and execute successfully.
- 2) If you need to schedule jobs at different times and they all require a single device, ensure that these jobs are scheduled to run at times far enough apart to allow the device to be released by a queue before the next job is scheduled to run.

6.14. Microsoft Plus Dial-up Networking Scripts

Microsoft Plus will install Dial-up Networking scripts used for connecting to Internet providers. MAT also uses Dial-up Networking scripts to provide a PPP connection to the Meridian 1. Attempting to cancel the connection when the scripting portion of Dial-up Networking is being executed will result in the PC locking up. If this happens the PC must be rebooted.

6.15. Adding Serial Communications Profiles

When adding or changing a serial connection profile, which involves changing the delay or timeout values, click on OK, before re-entering the System Properties to add another Communications profile. If OK is not selected, the next Communications profile added will have no fields available for input. If this should occur, click on OK and re-enter the System Properties to continue.

6.16. Access Privileges for Maintenance Windows and Alarm Management

User Access privileges for Maintenance Windows and Alarm Management are controlled through the Meridian 1 rather than those assigned through the User Template in MAT. The read-write or read-only access is assigned on the Meridian 1 using the MAT_READ_ONLY prompt under Limited Access Passwords in Overlay 17.

6.17. Administration of Common Data in a Network Environment

MAT 5 supports simultaneous access to common data in a LAN (network) environment. However, if multiple users attempt to perform administration functions, only one user is allowed read-write access and all other users are restricted to read-only access. There is an option to provide notification to a read-only access approved user when read-write access becomes available.

A further option is available to allow a user with administrative privileges to gain read-write access to site, system or user administration even if another administrative user currently already has that access by 'forcing' them out. The 'new' administrative user must then close and re-open the relevant function to gain read-write access.

6.18. Deleting a Site

When a site is to be deleted, all the associated systems must first be deleted to ensure that all data is correctly deleted.

6.19. Access to System Properties shows as Read-only

When a System Window is closed the user should wait a few moments before attempting to open the System Properties to update them as they will appear as Read-only, i.e., OK and Apply will be disabled. This is because System Properties are only Read-only when the associated System Window is open and it takes a few moments to close the database and update the access privileges after the System Window is closed.

6.20. User and System Administration Interactions

User Administration and System Administration have an interaction restriction in terms of read-write access, due to the inter-related database requirements of user template definition. When a user is given read-write access to user or system administration then all other users will only receive read-only access to user and system administration. Notification of availability of read-write access will only be provided when all related databases are no longer in use.

6.21. Deletion of User Templates

A user template can only be deleted when all associated users of that template are either deleted or re-assigned to another template.

6.22. User Access Permission Levels

A user can be restricted from having access to sites, systems and applications. However, when a user is defined as being restricted from any access to all sites, systems and applications, ie. the Navigator, the user will in fact be able to see all the sites and systems in the Navigator tree and have read-only access to their properties, but opening a system will only result in a System Window with no applications visible.

6.23. Sites and Systems Presented in User Template

When adding or modifying a user template, only systems that have applications enabled are presented. If no applications are enabled for any system within a given site, the site and system(s) will not appear in the Template Properties.

6.24. Using Windows 95 Screen Saver

When a Windows 95 Screen Saver is to be used when still logged into MAT, the Navigator must first be minimised for the screen saver to be activated.

6.25. ODBC Driver Login Failure Message

If you encounter a message box entitled "ODBC Microsoft Access 7.0 Driver Login Failure", the following actions are recommended:

1. Cancel the error message box
2. Re-do the failed operation
3. Re-boot your PC at the earliest opportunity.

6.26. Meridian 1 Release in System Data

When updating the Meridian 1 Release information in the System Data Tab of the System Properties, use the options from the drop-down list box instead of entering the release number manually.

7. Maintenance Windows Advisements

Maintenance Windows requires X11 Release 22 and only supports Ethernet/PPP connectivity with the Meridian 1.

7.1. Find PE Units by Directory Number

Selecting to find PE Units by Directory Number will list the PE Units configured with a DN or within a range of DNs. For multiple appearance DNs only one appearance for each DN will appear in the PE Units window. If a complete list of multiple appearance DNs is required the user is advised to select the first appearance of the required DN and then use the Status / DN block command from the object menu.

8. Alarm Management Advisements

Alarm Management requires X11 Release 22 and only supports Ethernet/PPP connectivity with the Meridian 1.

8.1. Event Preferences

Entries in the Event Preferences list will appear with leading zeros removed. For example, an entry of AUD008 will appear as AUD8. The entry will still correctly match the event, with the leading zeros, received from the Meridian 1.

8.2. Multiple Acknowledgment of Events

While it is possible to acknowledge / mark as cleared multiple events in the system event log, it is recommended that a maximum of 200 events be selected at a time.

9. ESN Analysis and Reporting Tool Advisements

ESN Analysis and Reporting Tool (ART) supports Ethernet/PPP and serial connectivity with the Meridian 1. Currently ESN ART can be used to retrieve the existing ESN from the Meridian 1 and to transmit a new or cloned ESN configuration to a Meridian 1 that does not have ESN configured.

9.1. Upgrading from MAT 5.00.26 or Earlier

When upgrading from MAT 5.00.26 or earlier releases to the latest release, the data stored in ESN ART for all systems will be deleted. To rebuild the ESN ART database for each system use the ESN Setup Wizard to retrieve the ESN data from the Meridian 1. If ESN ART was being used as an installation tool complete all outstanding ESN installations before upgrading to the latest version of MAT 5.

9.2. Aborting a Synchronization session connected via PPP

Aborting an ESN synchronization session will cause the modem to lock up requiring a reboot of the PC to release it.

9.3. Copying a Customer database

When using the ESN Setup Wizard to create an ESN database by copying from an existing ESN database, the user must select the customer number under the site and system that they wish to copy from.

9.4. Queuing of ESN Jobs

Queuing of ESN jobs, such as retrieval and transmission, has the limitation that one ESN job must be completed before another starts.

The average time for retrieval is half an hour via Ethernet or high speed modems and additional time should be allowed for slow speed modems. The average time for transmission is one hour for typical systems. Allow longer times for systems with large amounts of ESN data or when using slow speed modems.

9.5. Support of SDRR

ESN does not fully support the new Supplemental Digit Restriction and Recognition (SDRR) feature provided in X11 Release 22.

The new SDRR Allowed digits is supported for Special Numbers (SPN) but is not currently supported for NPA or NXXs. When installing ESN data to a Meridian 1, the user must add the NPAs and NXXs requiring SDRR allowed digits manually using the System Terminal. When ESN data containing NPA or NXX with SDRR allowed digits is retrieved from a Meridian 1, this data must be manually removed from the download file before parsing. This data will not appear in the ESN ART object managers or reports.

9.6. Leftwise Unique Support

ESN does not check the leftwise uniqueness of SPNs, NPAs, NXXs, LOCs, and HLOCs for a given access code (AC1 or AC2). When installing ESN data with this type of conflict (e.g., an NPA 408, and a SPN 4081 are not leftwise unique), the offending SPN, NPA, etc. will not be added to the Meridian 1.

10. Station Administration Advisements

Station Administration supports Ethernet and serial connectivity with the Meridian 1.

10.1. TTY Port Configuration

When using a serial connection to access the Meridian 1 the SDI port used for Station Administration should be configured only as a Service Change (SCH) port. If the port is configured for other data such as Traffic (TRF) or Maintenance (MTC) messages, MAT will attempt to distinguish this data from relevant Station data. The retrieve and transmit logs will show errors when data is not recognized as station data. This does not apply to Ethernet connections since the Pseudo TTYs (PTYs) used by MAT are dynamically configured to support the application.

10.2. Printing Designation Strips on a Dot Matrix Printer

MAT supports printing of designation strips and these strips can be printed on dot matrix printers. If problems are encountered printing designation strips, make the following changes:

- 1) From the Start button choose Settings and Printers
- 2) Highlight the dot matrix printer and choose Properties from the file menu
- 3) Click on the Details tab and click on the Spool Settings button.
- 4) Change the spool data format to RAW.

10.3. Read Only Access

If the user only has Read-only access to Station Administration and CPND, the About MAT item must not be selected from the Help menu as it will then not be possible to acknowledge the message and return to the application. If this happens, use Control-Alt-Delete to 'End Task' the MAT items and then re-launch MAT.

11. Traffic Analysis Module System Advisements

Traffic Analysis supports Ethernet and serial connectivity with the Meridian 1. When a buffer box is used to collect traffic data, Traffic Analysis will only support a serial connection.

11.1. Communications

While traffic is being collected over a serial connection, the Traffic Analysis Module requires exclusive use of one of the communication ports on the PC. If another task is using the COM Port, such as Station Administration or VT220 the Traffic data cannot be collected for that scheduled collection, however it will be queued waiting for the port to become available. It is recommended that the port be used exclusively for Traffic. If a dedicated port is not available the user must carefully coordinate activities for the port around the scheduled Traffic collections. An alternative is to use a buffer box to store the Traffic data, in this case collections can be scheduled based on traffic output and buffer box storage capacity.

11.2. Collection Filters Over Midnight

When the Traffic Analysis Module logs into the switch to collect traffic data, midnight routines will be interrupted. To avoid conflict with the midnight routines the Traffic Analysis Module can be instructed to exclude part of the day allowing midnight routines to run to completion. A filter should be created to specify a time range or ranges for exclusion and up to five ranges may be specified.

11.3. Printing Traffic Reports

When a report is printed to the screen and then the option to send to a printer is selected, do not cancel printing of the report to the screen until the report has printed correctly on the printer.

11.4. Runtime Error 201 (Traffic Filter problem)

It is recommended that when running traffic reports, graphs or what-if scenarios, the filter selection be set to None or a valid filter file. If the selection is blank there is a risk that the user could receive Runtime Error 201. If this error occurs, the user must delete the TAMCACHE.INF file. This file is located under the Application Executables directory (default is C:\Nortel) under the M1/Meridian Administration Tools sub-directory.

12. Call Accounting Advisements

Call Accounting supports only serial connectivity with the Meridian 1.

12.1. Collections with and without a Buffer Box

It is recommended that a buffer box be used for CDR data collection from the switch. When a buffer box is used the CDR data is continuously sent and stored on the buffer box. Once the user has scheduled collection, usually on a daily basis, the data will be collected from the buffer box to the PC. A buffer box is not required to use the Call Accounting application. However, if you choose to collect the data directly to the PC without the buffer box, there is a potential for losing CDR data if the PC is rebooted or shut down.

12.2. Data Collection

Call Accounting scheduled data collection should be used instead of the data collection choice that starts data collection from within the Call Accounting module. When a data collection is started from within Call Accounting (ie. not scheduled), the user must not exit the System Window until the data collection is complete. MAT 5 currently does not support running Call Accounting as a background task and requires the user to remain logged into MAT. Do not log out or terminate MAT while this data collection is in progress.

13. Call Tracking Advisements

Call Tracking supports only serial connectivity with the Meridian 1.

13.1. Call Tracking Real Time Session

When a real time monitor session is in progress, MAT will not allow the user to exit the System Window until the session is over. MAT 5 currently does not support running Call Tracking as a background task and requires the user to remain logged into MAT. Do not log out or terminate MAT while a real time monitor session is in progress.

13.2. Fax Alarm

The Call Tracking fax alarm function requires a fax application to be running under Windows 95 in order for it to send fax messages. Currently only WinFax PRO™ is supported and must be installed before attempting to use the fax alarm option.

13.3. Help on Fax Alarm Parameters

Help is missing for **Fax Alarm Parameters** and is as follows:

In the 'Fax Number' field, enter the telephone number to be dialed by the fax application when an alarm is encountered. In the 'Deliver to' field, enter the name to be printed on the fax message. In the 'Fax Manager Filename' field (of the Alarm dialog), enter the full directory and filename of the installed fax manager software.